Claims

1. An image processor comprising:

a data processor including an operating means for outputting an operating signal for operating a display member displayed on a display means;

an image processing means for carrying out an image processing for displaying said display member on said display means based on the operating signal; and

a video means for forming a video signal based on the image processed result from the image processing means and outputting it to said display means, said image processor having a polygon processing means for increasing more the number of polygons forming said display member than that of polygons of said display member before it is deformed based on an image deforming signal from said image processing means.

2. An image processor according to claim 1, wherein said polygon processing means comprises a polygon forming means for forming at least one part of said display member with a minimum number of polygons;

a polygon number increasing means for increasing the number of polygons forming the one part when the one part of the display member constituted of the minimum number of polygons is deformed and displayed; and

a deformation processing means for carrying out an image processing for displaying the deformation of the one part of said

display member constituted of the minimum number of polygons based on the increased number of polygons.

3. An image processor according to claim 2, wherein said polygon forming means is provided with a first means for forming a part of the display member in the shape of a polyhedron each face of which is composed of one polygon and said polygon number increasing means is provided with a second means for increasing one polygon to form each face of said polyhedron with a plurality of polygons.

4. An image processor according to claim 2, wherein said image processing means comprises a first character and a second character respectively simulating the body for said display member and is provided with a collision deciding means for deciding the collision of the head of the first character with the second character;

said polygon forming means forms the head of the first character with a hexahedron each face of which is constituted of one polygon, said polygon number increasing means increases the number of polygons in each face of the hexahedron when the decision of collision by said collision deciding means is affirmed and said deformation processing means carries out an image processing for the deformed head based on the increased number of polygons.

5. A device according to claim 4, wherein each face of said head is formed in a rectangular shape which can be composed of

one polygon.

6. An image processor comprising:

a data processor including an operating means for outputting an operating signal for operating a display member displayed on a display means;

an image processing means for carrying out an image processing for displaying the display member on said display means based on the operating signal;

a video means for forming a video signal based on the image processed result from the image processing means and outputting it to said display means; and

an image processed surplus power display means for displaying a surplus power in image processing applied to the display member as an image, and

said image processed surplus power display means including a whole surplus power display means for displaying a whole surplus power, a display means of a remaining surplus power relative to a whole surplus power and a whole surplus power changing means for gradually changing the whole surplus power as an image processing progresses.

7. An image processor according to claim 6 further comprising a storing means for storing values obtained by gradually decreasing the whole surplus power, said whole surplus power changing means gradually reading the whole surplus powers corresponding to the values from said storing means in accordance

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with an image processing state so that the whole surplus power is decreased.

8.   An image processor according to claim 6 or 7, wherein the whole surplus power in the image processing is a life count value given to a character as said display member.

9.   An image processor comprising:

a data processor including an operating means for outputting an operating signal for operating a plurality of display members displayed on a display means;

an image processing means for displaying said display members on said display means based on the operating signal; and

a video means for forming a video signal based on the image processed result from the image processing means and outputting it to said display means,

said image processing means including a polygon forming means for forming said display members with polygons,

an image forming means for forming the images of the display members viewed from a predetermined viewpoint and

a perspective processing means for perspectively processing a part of the polygons of the display member in the front side of said viewpoint.

10.   A device according to claim 9, wherein said perspective processing means applies a mesh processing to a relevant polygon.

11.   An image processor comprising:

a data processor including an operating means for outputting

an operating signal for operating a display member displayed on a display means;

an image processing means for carrying out an image processing for displaying the display member on said display means based on the operating signal; and

a video means for forming a video signal based on the image processed result from the image processing means and outputting it to said display means, and

said image processing means including a deciding means for deciding whether an operation according to a predetermined regulation is input to the operating means or not and a suppressing means for suppressing the degree of an image processing applied to the display member when the decided result by said deciding means is that the operation according to the regulation is not applied to the operating means.

12. A game machine having a display means and an image processor according to any one of claims 1 to 11.

13. A storing medium according to any one of claims 1 to 12 in which a procedure for executing the respective means by a computer is stored.

Claims

1. (amended)

An image processor comprising:

an image processing means for carrying out an image processing for displaying a display member based on an operating signal; and a polygon processing means for increasing more the number of polygons forming said display member than that of polygons before said display member is deformed, based on an image deforming signal, which is generated by the collision of a plurality of display members, from the image processing means.

2. An image processor according to claim 1, wherein said polygon processing means comprises a polygon forming means for forming at least one par of said display member with a minimum number of polygons;

a polygon number increasing means for increasing the number of polygons forming the one part when the one part of the display member constituted of the minimum number of polygons is deformed and displayed; and

a deformation processing means for carrying out an image processing for displaying the deformation of the one part of said display member constituted of the minimum number of polygons based on the increased number of polygons.

3. An image processor according to claim 2, wherein said polygon forming means is provided with a first means for forming a part of the display member in the shape of a polyhedron each

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face of which is composed of one polygon and said polygon number increasing means is provided with a second means for increasing one polygon to form each face of said polyhedron with a plurality of polygons.

4. An image processor according to claim 2, wherein said image processing means comprises a first character and a second character respectively simulating the body for said display member and is provided with a collision deciding means for deciding the collision of the head of the first character with the second character;

said polygon forming means forms the head of the first character with a hexahedron each face of which is constituted of one polygon, said polygon number increasing means increases the number of polygons in each face of the hexahedron when the decision of collision by said collision deciding means is affirmed and said deformation processing means carries out an image processing for the deformed head based on the increased number of polygons.

5. A device according to claim 4, wherein each face of said head is formed in a rectangular shape which can be composed of one polygon.

6. (amended)

An image processor comprising:

an image processing means for carrying out an image processing for displaying a display member based on an operating

signal; and   an image processed surplus power display control

means for displaying a surplus power in image processing applied

to the display member as an image,

said image processed surplus power display control means

including a whole surplus power display control means for

displaying a whole surplus power, a display control means of a

remaining surplus power relative to a whole surplus power and a

whole surplus power changing means for gradually changing the

whole surplus power as an image processing progresses.

7.   An image processor according to claim 6 further comprising

a storing means for storing values obtained by gradually

decreasing the whole surplus power, said whole surplus power

changing means gradually reading the whole surplus powers

corresponding to the values from said storing means in accordance

with an image processing state so that the whole surplus power

is decreased.

8.   An image processor according to claim 6 or 7, wherein the

whole surplus power in the image processing is a life count value

given to a character as said display member.

9.   (amended)

An image processor comprising: an image processing means for

displaying display members composed of three-dimensional

coordinate data,

said image processing means including a polygon forming

means for forming said display members with polygons, an image

forming means for forming the images of the display members viewed from a predetermined viewpoint and a perspective processing means for perspectively processing at least a part of the polygons of the display member in the front side of said viewpoint.

10. A device according to claim 9, wherein said perspective processing means applies a mesh processing to a relevant polygon.

11. (amended)

An image processor comprising: an image processing means for carrying out an image processing for displaying a display member based on an operating signal,

said image processing means including a deciding means for deciding whether an operation according to a predetermined regulation is input to an operating means or not and a suppressing means for suppressing the degree of an image processing applied to the display member when the decided result by said deciding means is that the operation according to the regulation is not applied to the operating means.

12. (cancelled)

13. (cancelled)

14. (new)

An image processor for displaying a plurality of characters composed of polygon data, said image processor comprising:

a collision deciding means for deciding the collision of said plurality of characters; a transforming signal output means

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for outputting a transforming signal for transforming at least one character when a collision is decided, and a polygon changing means for changing the number of polygons forming the character transformed based on the transforming signal.

15. (new)

An image processor according to claim 14, wherein said polygon changing means applies a predetermined addition and subtraction processing to the number of polygons before transformation.

16. (new)

A game machine having a display means and an image processor according to any one of claims 1 to 11, or claim 14 or 15.

17. (new)

A recording medium according to any one of claims 1 to 11, or claim 14 or 15 in which a procedure for executing the respective means by a computer is stored.